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Health at a Glance

Mental and substance use disorders in Canada

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.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
p	preliminary
r	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
E	use with caution
F	too unreliable to be published
*	significantly different from reference category ($p < 0.05$)

Health at a Glance

Statistics Canada, Catalogue no 82-624-X

Mental and substance use disorders in Canada

by Caryn Pearson, Teresa Janz and Jennifer Ali

Highlights

- In 2012, a total of 2.8 million Canadians aged 15 and older, or 10.1%, reported symptoms consistent with at least one of the following mental or substance use disorders: major depressive episode, bipolar disorder, generalized anxiety disorder, and abuse of or dependence on alcohol, cannabis or other drugs.
- Over the course of the lifetime, rates of substance use disorders were higher than the rates for mood disorders. About 6 million Canadians met the criteria for substance use disorder, while 3.5 million met the criteria for mood disorder.
- Females had higher rates of mood disorders and generalized anxiety disorder than males, while males had higher rates of substance use disorders.

Mental disorders are conditions that signify considerable distress or disability, behavioural or psychological dysfunction, or risk of a harmful or poor outcome, such as suffering, pain, disability or death.[1] While mental health disorders are commonly known for their impact on health and well-being, they also have an economic impact in terms of absenteeism, loss of productivity, unemployment and medical expenses.[2] A study of the global burden of disease found that mental disorders such as depression and generalized anxiety, as well as drug and alcohol use are among the main causes of disability worldwide.[3]

This article provides results from the 2012 Canadian Community Health Survey – Mental Health (CCHS – MH). The survey collected information on selected disorders from Canadians aged 15 and older. The data include both lifetime and 12-month rates of mental and substance use disorders. This article also highlights data on generalized anxiety disorder and cannabis abuse or dependence that were collected at the national level for the first time by a population health survey.

Lifetime rates reflect those who have met the criteria for a mental or substance use disorder at some point in their past. The 12-month rates provide information regarding current cases of a condition in the population. The 12-month rates are useful for informing policy and programs as well as for comparing rates over time.

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Mental or substance use disorders over the lifetime

In 2012, 1 in 3 Canadians[4] (about 9.1 million people), met the criteria for at least one of the six selected mental or substance use disorders[5] at some point in their life (Table 1). Since the measurement of certain disorders has changed since the last survey in 2002, and the disorders in 2012 are different, the rate of any mental or substance use disorder, as well as many other rates are not comparable over time (see section: 'Comparing the content of the 2002 and 2012 Canadian Community Health Survey — Mental Health' below).

Approximately 21.6% of Canadians (about 6 million people) met the criteria for a substance use disorder during their lifetime (Table 1). Alcohol was the most common substance for which people met the criteria for abuse or dependence at 18.1%. More Canadians had symptoms of cannabis abuse or dependence in their lifetime (6.8%) compared with other drugs (4.0%). This is the first time a national rate of cannabis abuse or dependence has been assessed.

About 3.5 million Canadians, or 12.6%, met the criteria for a mood disorder during their lifetime. Major depressive episode (depression) accounted for the majority of cases of mood disorder; about 3.2 million people, or 11.3%, had symptoms consistent with depression. About 2.6% of the population had a profile consistent with bipolar disorder, which accounted for a minority of mood disorder cases.

A total of 2.4 million Canadians reported symptoms consistent with generalized anxiety disorder during their lifetime. A higher percentage of Canadians met the criteria for generalized anxiety disorder (8.7%) than abuse of or dependence on cannabis or other drugs, and bipolar disorder (Table 1).

Comparing the content of the 2002 and 2012 Canadian Community Health Survey – Mental Health

Most disorders measured in the CCHS – MH 2012 are not comparable to the disorders measured by this survey in 2002. This is because the selection of disorders used to define certain composite measures of disorders, and the survey questions, differ on the two surveys.

Additionally, the surveys measured the disorders according to criteria from the World Health Organization Composite International Diagnostic Interview 3.0 (WHO – CIDI), which was revised after 2002. Specifically, the criteria used in 2002 to classify people with bipolar I disorder were found to overestimate the rates.[6] As a result of this change, the 2012 rate for bipolar I disorder is not comparable with the rate calculated in 2002.

Table 1: Rates of selected mental or substance use disorders, lifetime and 12 month, Canada, household population 15 and older, 2012

	Lifetime	12-month
	percent	
Mental or substance use disorders[1]	**33.1**	**10.1**
Substance use disorder[2]	21.6	4.4
Alcohol abuse or dependence	18.1	3.2
Cannabis abuse or dependence	6.8	1.3
Other drug abuse or dependence (excluding Cannabis)	4.0	0.7
Mood disorder[3]	12.6	5.4
Major Depressive Episode	11.3	4.7
Bipolar Disorder	2.6	1.5
Generalized Anxiety Disorder	8.7	2.6

1 **Mental or substance use disorders** is comprised of substance use disorders, mood disorders and general anxiety disorder. However, these three disorders cannot be added to create this rate because these three categories are not mutually exclusive, meaning that people may have a profile consistent with one or more of these disorders.

2 **Substance use disorder** includes alcohol abuse or dependence, cannabis abuse or dependence and other drug abuse or dependence.

3 **Mood disorder** includes depression (major depressive episode) and bipolar disorder.

Source: Statistics Canada, Canadian Community Health Survey – Mental Health, 2012.

Other specific examples of changes in 2012 are that the overall measure of mental or substance use disorder, bipolar disorder, and drug abuse or dependence are assessed differently. New disorders are measured for the first time, such as generalized anxiety disorder and cannabis abuse or dependence; while certain disorders are no longer measured — social phobia, agoraphobia and panic disorder.[7]

Because of these changes the only disorders that can be directly compared from 2002 to 2012 are depression and an older version of bipolar I disorder (also called manic episode) defined according to the 2002 definition. When bipolar I disorder is defined using the 2002 definition, the 12-month rate remained steady between 2002 and 2012 at around 1%. In 2012, the 12-month rate for depression, approximately 5%, also remained stable since 2002. This is consistent with other studies which have also found that the prevalence of depression and distress has remained generally stable among Canadians over the past 15 years.[8]

Snapshot of mental health in 2012

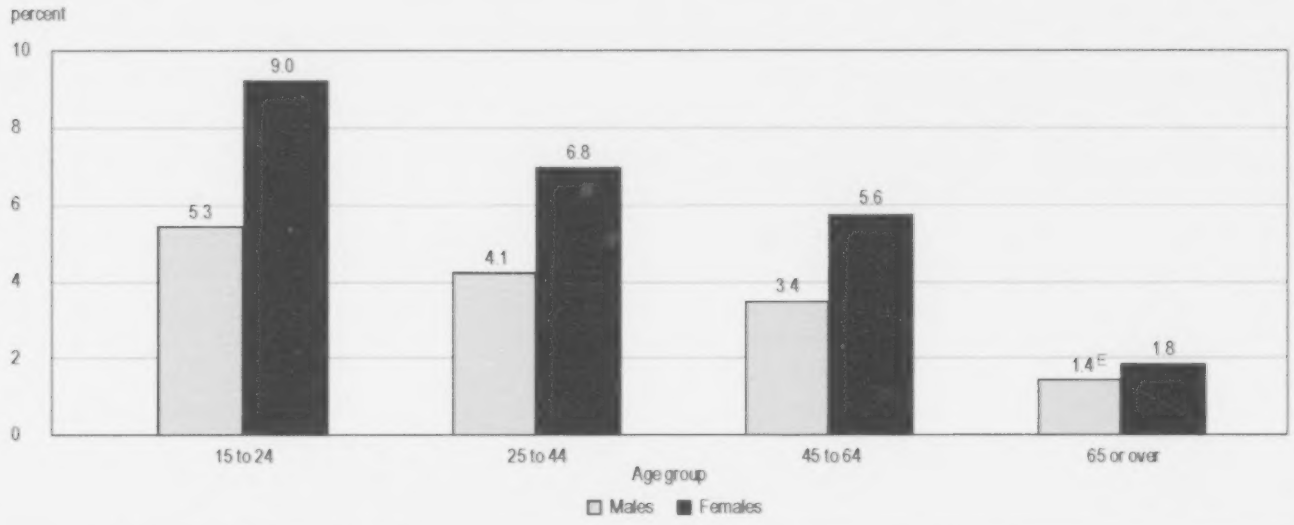
In the 12 months prior to the survey, about 1 in 10 Canadians, or 2.8 million people, met the criteria for at least one of the six selected mental or substance use disorders measured by the CCHS – MH (see textbox: 'What you need to know about this study').

Looking at 12-month rates for the broad categories of disorders (Table 1), the largest percentage of Canadians met the criteria for mood disorders at 5.4%. Depression was the most common type of mood disorder at 4.7%, while 1.5% of the population met the criteria for bipolar disorder.

Alcohol abuse or dependence was the most common type of substance use disorder in the past year, with 3.2% of the population having a profile consistent with alcohol abuse or dependence. The proportion of Canadians who met the criteria for cannabis abuse or dependence in the past year (1.3%) was almost double the rate of other drug abuse or dependence (0.7%).

A total of 2.6% of Canadians met the criteria for generalized anxiety disorder in 2012. This is almost half the rate of substance use disorder (4.4%), and mood disorder (5.4%).

Chart 1 Rates of depression, 12-month,[1] by age and sex, Canada, household population 15 and older, 2012



E use with caution (these data have a coefficient of variation from 16.6% to 33.3%)

1. Respondents were classified with depression if they met the criteria for this condition in the 12 months prior to the survey. See textbox: 'What you need to know about this study' for more information.

Source: Statistics Canada, Canadian Community Health Survey – Mental Health, 2012.

Rates by age groups and sex, 12-month

In 2012, rates of mood disorders and substance use disorders for the 12 months prior to the survey tended to be lower in older age groups. Mood disorders, for both males and females, were highest among youth aged 15 to 24 (8.2%), and lowest for those aged 65 and older (1.7%). Substance use disorders followed a similar pattern — highest among youth (11.9%) and lowest among adults aged 45 and over (1.9%). Youth have been commonly found in other studies have higher 12-month rates of mood disorders and substance use disorders than older age groups.[9] Similarly, low rates of disorders among those aged 65 and older is a common pattern found in other research.[10,11]

In 2012, females had a higher rate of depression within the previous 12 months (5.8%), than males (3.6%). Females also had higher rates of depression than males in all age groups — except among those aged 65 and older, where the rates were similar (Chart 1).

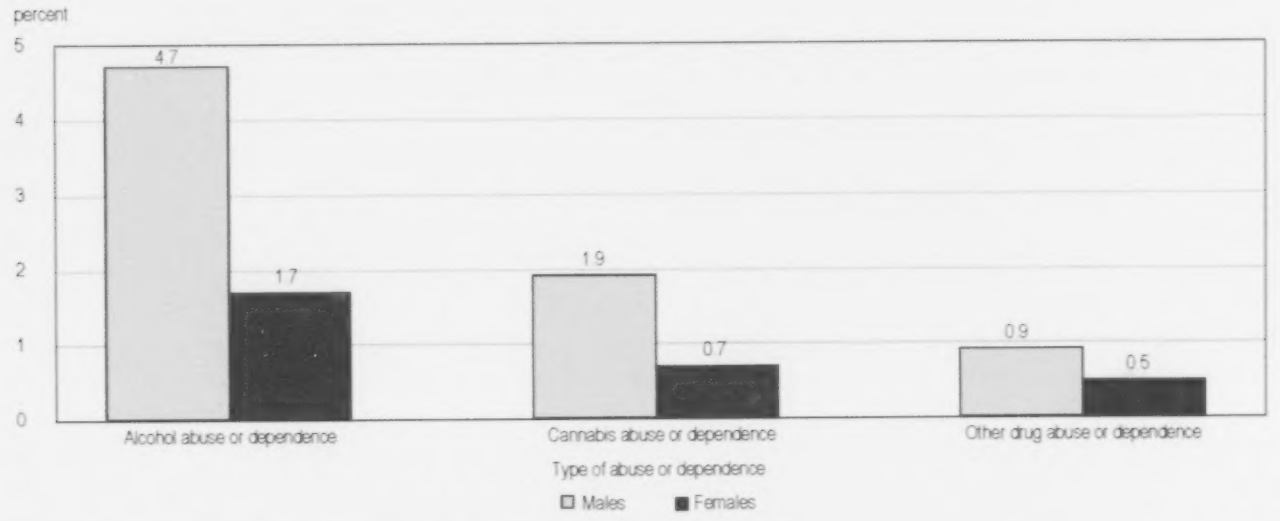
For both males and females, rates of depression within the past year were highest among youth aged 15 to 24, and lowest among those aged 65 and older. The largest difference between males and females was in the youngest age group, where among those aged 15 to 24, 9.0% of females met the criteria for depression, compared with 5.3% of males.

Generalized anxiety disorder

Generalized anxiety disorder was measured for the first time in a Canadian national population health survey in 2012. Similar to what was observed for depression, females tended to have a higher rate of generalized anxiety disorder (3.2%) than males (2.0%). Unlike depression, where the rates varied by age, the rates of generalized anxiety disorder remained fairly steady across most age groups, ranging from 2.4% to 3.0%, until age 65 and older where there were relatively few cases.

Depression (4.7%) was more common among Canadians than generalized anxiety disorder (2.6%) (Table 1). Of those with generalized anxiety disorder, 52.6% also met the criteria for depression. This co-occurrence of depression and generalized anxiety disorder is a commonly found pattern in other research.[12,13]

Chart 2 Rates of substance use disorders, 12-month,[1] by sex, Canada, household population 15 and older, 2012



1. Respondents were classified with substance use disorder if they met the criteria for this condition in the 12 months prior to the survey. See textbox: 'What you need to know about this study' for more information.

Source: Statistics Canada, Canadian Community Health Survey – Mental Health, 2012.

Substance use disorders

Similar to what was found for depression, youth had higher rates of substance use disorders than all other age groups. Youth aged 15 to 24 had the highest rate of substance use disorder (11.9%), while the lowest rate, 1.9%, was among those aged 45 and older.[14] Youth have also been found in other studies to have the highest rates of substance abuse or dependence.[15]

Unlike depression and generalized anxiety disorder where females were found to have higher rates, males had higher rates of substance use disorders in the past 12 months. Approximately 6.4% of males and 2.5% of females reported symptoms consistent with substance use disorder.

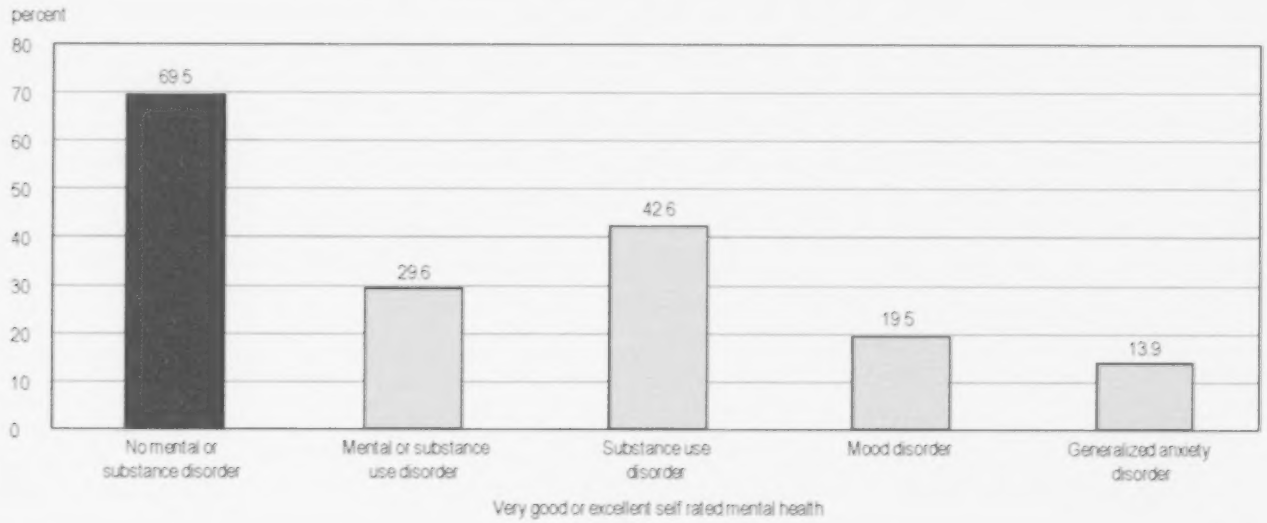
While males and females had similar rates of other (non-cannabis) drug abuse or dependence over the past year, males had higher rates of abuse of or dependence on alcohol and cannabis than did females. That is, approximately 4.7% of males and 1.7% of females met the criteria for alcohol abuse or dependence in the past year; and 1.9% of males and 0.7% of females met the criteria for cannabis abuse or dependence.

Perceptions of mental health

Canadians with a mental or substance use disorder within the past year were less likely to rate their mental health as positive during the same time frame, compared with those who did not have a mental or substance use disorder (Chart 3). Approximately 29.6% of those with a mental or substance use disorder perceived their mental health as very good or excellent. This finding may partly reflect the episodic nature of these disorders, since they can occur between periods of good health.

People with a profile consistent with substance use disorder rated their mental health much higher than those with mood disorder or generalized anxiety disorder. A higher proportion of people with substance use disorder rated their mental health as excellent or very good (42.6%), compared to those with mood disorder (19.5%) or generalized anxiety disorder (13.9%) — whose self-evaluations of mental health were roughly the same.

Chart 3 Excellent or very good self-rated mental health among Canadians without and with selected mental or substance disorders, 12-month,[1] household population 15 and over, 2012



1. Respondents were classified with a mental or substance use disorder if they met the criteria for this condition in the 12 months prior to the survey. See textbox: 'What you need to know about this study' for more information.

Source: Statistics Canada, Canadian Community Health Survey – Mental Health, 2012.

Summary

In 2012, 1 in 10 Canadians met the criteria for at least one of the six selected mental or substance disorders.

Due to changes in measurement, as well as the suite of disorders assessed, very few comparisons can be made with disorders measured in the 2002 survey. Only depression and an older version of bipolar I disorder defined according to the criteria in 2002 (manic episode), can be compared with 2002. For both disorders, the rates remained relatively stable between 2002 and 2012.

In 2012, females had higher rates of depression and anxiety disorders than males, and males had higher rates of substance use disorders. Rates of mood disorders and substance use disorders tended to be high among youth and low among the oldest age groups.

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What you need to know about this study:

The rates given for mental and substance use disorders may be an underestimate of the extent of these issues in the Canadian population. This is because the CCHS – MH measured select mental and substance use disorders, meaning not all disorders have been covered by the survey. Excluded from the survey are persons living on reserves and other Aboriginal settlements, full-time members of the Canadian Forces, and the institutionalized population.

Mental or substance use disorders

The CCHS – MH used the World Health Organization - Composite International Diagnostic Interview 3.0 (WHO-CIDI) to classify people with select mental or substance use disorders. Although this is not a clinical diagnosis, this is a standardized instrument that is typically used to assess mental disorders in population surveys[16,17] according to the Diagnostic and Statistical Manual of Mental Disorders version IV (DSM-IV) criteria.[18]

This paper analyzes the six CIDI disorders assessed in the survey. The survey also asks respondents other questions about chronic conditions diagnosed by a health professional, such as: eating disorders, post-traumatic stress disorder, attention deficit disorder, obsessive compulsive disorder, Alzheimer's or other dementia, and schizophrenia and other psychosis (to see the rates for some of these disorders, see CANSIM table 105-1101). However, note that the measurement of chronic conditions (which is diagnosed by a health professional) is not comparable to the CIDI measurement (which is based on symptoms).

Following the measures from the CIDI, the following six disorders were included in the CCHS – MH (lifetime and 12-month):

1. **Depression (major depressive episode):** is identified as a period of 2 weeks or more with persistent depressed mood or loss of interest in normal activities, as well as other symptoms including: decreased energy, changes in sleep and appetite, impaired concentration, feelings of hopelessness, or suicidal thoughts.
2. **Bipolar disorder:** includes respondents who meet the criteria for bipolar I disorder or hypomanic episode, which includes bipolar II disorder. It is characterized by at least 7 days (or fewer if hospitalized) of exaggerated feelings of elevated or irritable mood plus a certain number and combination of other manic symptoms such as racing thoughts, talking more than usual, excessive spending, decreased need for sleep, increased pleasure seeking activity, or exaggerated self-confidence. Many people also experience at least one depressive episode.
3. **Generalized anxiety disorder:** is identified by a pattern of frequent, persistent worry and excessive anxiety about several events or activities lasting at least 6 months along with other symptoms.[19]
4. **Alcohol abuse or dependence:** includes those who met the criteria for abuse or dependence (see definitions of abuse or dependence below) of alcohol.
5. **Cannabis abuse or dependence:** includes those who met the criteria for abuse or dependence (see definitions below) of cannabis. Where possible, cannabis abuse or dependence is analyzed separately from other drug abuse or dependence.
6. **Other drug abuse or dependence (excluding cannabis):** includes those who met the criteria for abuse or dependence (see definitions below) of substances such as club drugs, cocaine, heroin, solvents, prescription drugs used for nonmedical reasons, and any other illicit drugs.

   Abuse is characterized by a pattern of recurrent use where at least one of the following occurs: failure to fulfill major roles at work, school or home, use in physically hazardous situations, recurrent alcohol or drug related problems, and continued use despite social or interpersonal problems caused or intensified by alcohol or drugs.

   Dependence is when at least three of the following occur in the same 12 month period: increased tolerance, withdrawal, increased consumption, unsuccessful efforts to quit, a lot of time lost recovering or using, reduced activity, and continued use despite persistent physical or psychological problems caused or intensified by alcohol or drugs.

Notes

1. See American Psychiatric Association 2000.
2. See Lim et al.2008.
3. See Institute for Health Metrics and Evaluation.
4. Mental or substance use disorders were determined by an algorithm based on responses using the CIDI and not a clinical diagnosis. The CCHS – MH measured select disorders of Canadians aged 15 and older. The institutionalized population were also excluded from the sample which may have led to an underestimation of the prevalence of mental or substance use disorders.
5. The six selected disorders include major depressive episode, bipolar disorder, generalized anxiety disorder, alcohol abuse or dependence, cannabis abuse or dependence, and other drug abuse or dependence. These disorders cannot be added to create an overall total as these disorders are not mutually exclusive, meaning that people may have had a profile consistent with one or more of these disorders.
6. Please see the CCHS user guide for a detailed overview of the changes to the measure.
7. See CCHS – MH User Guide for full detail of the differences.
8. See Simpson et al. 2012.
9. See Kessler et al. 2010.
10. See Kessler et al. 2010.
11. See Kessler et al. 1994.
12. See Belzer et al. 2004.
13. See Nguyen et al. 2005.
14. The age groups of 45 to 64 and 65 and older were combined into one age group of 45 and older for the analysis of substance use disorders due to the small sample of those 65 and older with substance use disorders.
15. See Kessler et al. 1994.
16. See Kessler et al. 2004.
17. See Australian Bureau of Statistics, 2009.
18. See CCHS – MH User Guide.
19. Other symptoms of generalized anxiety disorder include difficulty concentrating, irritability, sleep disturbance, shortness of breath, gastrointestinal symptoms, or restlessness. This anxiety is difficult to control and causes significant impairment when attempting to participate in normal daily activities

References

Australian Bureau of Statistics. *2007 National Survey of Mental Health and Welling: User's guide* (cat. No. 4327.0). Canberra: Australian Bureau of Statistics. http://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/4327.0Main%20Features42007?opendocument&tabname=Summary&prodno=4327.0&issue=2007&num=&view= (accessed April 29, 2013).

American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*. Washington, DC: American Psychiatric Association, 2000.

Belzer, Kenneth and Franklin Schneier. 2004. "Comorbidity of anxiety and depressive disorders: issues in conceptualization, assessment and treatment." *Journal of Psychiatric Practice*. Vol. 10, no. 5.

Institute for Health Metrics and Evaluation. *The Global Burden of Disease: Generating Evidence, Guiding Policy*. Seattle: University of Washington, 2013.

Kessler, Ronald, Katherine McGonagle, Shanyang Zhao, Christopher Nelson, Michael Hughes, Suzann Eshleman, Hans Ulrich Wittchen and Kenneth Kendler. 1994. "Lifetime and 12-Month Prevalence of DSM-III-R Psychiatric Disorders in the United States." *Results from the National Comorbidity Survey*. Vol. 51. P 8-19.

Kessler, Ronald, Patricia Berglund, Wai Tat Chiu, Olga Demler, Steven Heeringa, Eva Hiripi, Robert Jin, Beth-Ellen Pennell, Ellen Walters, Alan Zaslavsky and Hui Zheng. 2004. "The US National Comorbidity Survey Replication (NCS-R): Design and field procedures." *International Journal of Methods in Psychiatric Research*. Vol. 13, no. 2. P 1369-92. http://ek5mt5jzz7.scholar.serialssolutions.com/?sid=google&auinit=RC&aulast=Kessler&atitle=The+US+National+Comorbidity+Survey+Replication+(NCS%E2%80%90R)+:+design+and+field+procedures&id=doi:10.1002/mpr.167&title=International+journal+of+methods+in+psychiatric+research&volume=13&issue=2&date=2004&spage=69&issn=1049-8931 (accessed May 14, 2013).

Kessler, Ronald, Howard Birnbaum, Victoria Shahly, Evelyn Bromet, Irving Hwang, Katie McLaughlin, Nancy Sampson, Laura Helena Andrade, Giovanni de Girolamo, Koen Demyttenaere, Josep Maria Haro, Aimee Karam, Stanislav Kostyuchenko, Viviane Kovess, Carmen Lara, Daphna Levinson, Herbert Matschinger, Yoshibumi Nakane, Mark Oakley Browne, Johan Ormel, Jose Posada-Villa, Rajesh Sagar and Dan Stein. 2010. "Age differences in the prevalence and comorbidity of DSM-IV major depressive episodes: Results from the WHO World Mental Health Survey Initiative." *Depress Anxiety*. Vol. 27, no. 4. P 351-364.

Lim K L, Jacobs P, Ohinmaa A, Schopflocher D, and CS Dewa. 2008. "A new Population-based measure of the economic burden of mental illness in Canada." *Chronic Diseases in Canada*. Vol. 28, no. 3. p 92-98. http://publications.gc.ca/collections/collection_2009/aspc-phac/H12-27-28-3E.pdf (accessed March 28, 2013).

Nguyen, Cat Tuong, Louise Fournier, Lise Bergeron, Pasquale Roberge and Geneviève Barrette. 2005. "Correlates of Depressive and Anxiety Disorders Among Young Canadians." *Canadian Journal of Psychiatry*. Vol. 50, no. 10. P 620-628.

Simpson, Keith, Graham Meadows, Allen Frances and Scott Patten. 2012. "Is Mental Health in the Canadian Population Changing Over Time?" *Canadian Journal of Psychiatry*. Vol. 57, no. 5. P 324-331.

Statistics Canada. 2013. *Canadian Community Health Survey – Mental Health User Guide*. Ottawa: Statistics Canada. (accessed August 27, 2013).